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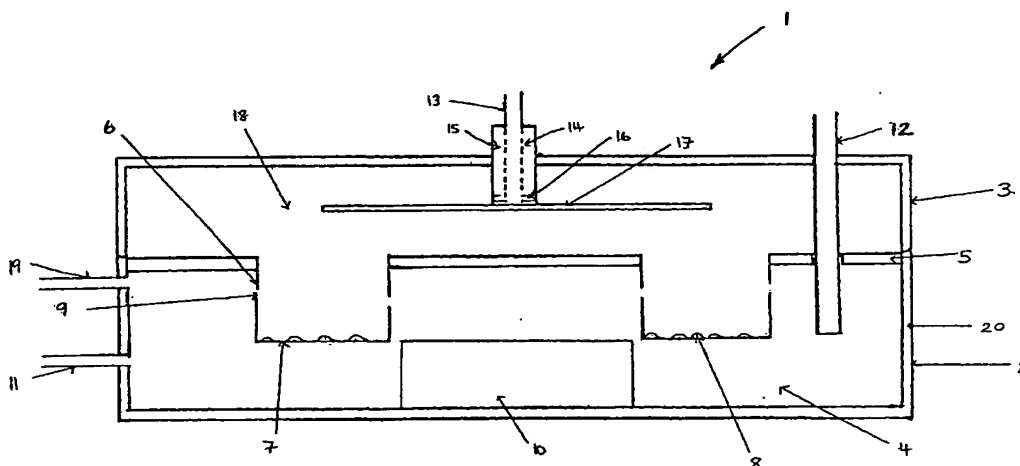
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: AN EXPOSURE DEVICE



(57) Abstract: The present invention relates to an exposure device for living cell cultures, the device having a medium chamber common to a plurality of cell culture chambers and medium directing means. The medium chamber, cell culture chambers and the medium directing means may be arranged so as to provide substantially contemporaneous medium exchange at the cell culture chambers.



patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

Published:

- *with international search report*

- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

PCT/GB 03/02254

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G01N33/50 C12M3/00 C12M1/36

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N C12M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 36505 A (MOHR ULRICH ;AUFDERHEIDE MICHAELA (DE)) 22 July 1999 (1999-07-22) cited in the application abstract; claims; figures 6,7	1-38
X	DE 195 26 533 A (FRAUNHOFER GES FORSCHUNG) 23 January 1997 (1997-01-23) cited in the application abstract; claims; figures	1-38
P, X	AUFDERHEIDE M ET AL: "Novel approaches for studying pulmonary toxicity in vitro" TOXICOLOGY LETTERS, ELSEVIER BIOMEDICAL PRESS, AMSTERDAM,, NL, vol. 140-141, 11 April 2003 (2003-04-11), pages 205-211, XP002255450 ISSN: 0378-4274 page 206 -page 208; figure 1 -/-	1-38

☒ Further documents are listed in the continuation of box C:

☒ Patent family members are listed in annex:

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

28 October 2003

Date of mailing of the international search report

03/11/2003

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INTERNATIONAL SEARCH REPORT

PCT/GB 03/02254

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	AUFDERHEIDE MICHAELA ET AL: "A method for the in vitro exposure of human cells to environmental and complex gaseous mixtures: application to various types of atmosphere." ALTERNATIVES TO LABORATORY ANIMALS: ATLA. ENGLAND 2002 JUL-AUG, vol. 30, no. 4, July 2002 (2002-07), pages 433-441, XP009020004 ISSN: 0261-1929 page 435 -page 436	1-38
X	US 5 308 758 A (DAHL THOMAS A) 3 May 1994 (1994-05-03) *see abstract* column 2 -column 4; claims; figure 2B	1-38

INTERNATIONAL SEARCH REPORT

PCT/GB 03/02254

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 39
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB 03 02254

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 39

Present claim 39 relates to an extremely large number of possible devices. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the devices claimed. Claim 39, does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not defined. the claimed "exposure device" does not contain any technical eatures and thus the novelty of the claim cannot be checked. In the present case, the claim so lacks support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the application which appear to be supported and disclosed, namely those parts relating to the devices and methods of claims 1-38.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

PCT/GB 03/02254

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9936505	A	22-07-1999	DE 19801763 A1	22-07-1999
			AU 2422299 A	02-08-1999
			WO 9936505 A1	22-07-1999
			EP 1049765 A1	08-11-2000
			JP 2002508954 T	26-03-2002
DE 19526533	A	23-01-1997	DE 19526533 A1	23-01-1997
US 5308758	A	03-05-1994	NONE	